

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (canceled).

2. (currently amended): The ~~optical modulator~~ exposure head according to claim 1, wherein each of said plurality of flexible light transmitting ~~member~~ members is formed of a transparent material having electrical conductivity, and said modulation device brings the plurality of light transmitting ~~member~~ members into contact with the boundary surface of the optical waveguide by using static electricity.

3. (canceled).

4. (currently amended): An exposure head, comprising:

an optical modulator which includes:

an optical waveguide for receiving light entered from a first end surface thereof and for emitting the light from a second end surface opposing to the first end surface;

a plurality of flexible light transmitting members, disposed so as to face with a boundary surface of said optical waveguide and has a gap between the flexible members and the boundary surface of the optical waveguide, said plurality of flexible light transmitting members being arranged in a direction orthogonal to a traveling direction of the light in the optical waveguide; and

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a modulation device for bringing said plurality of flexible light transmitting members into contact with the boundary surface of the optical waveguide, said modulation device being set in correspondence with each of said plurality of flexible light transmitting members; and

a light source allowing the light to enter into the first end surface on a light incidence side of the optical waveguide,

wherein said modulation device switches functions of said optical waveguide with respect to the plurality of flexible light transmitting members, one function being that at least one of the flexible light transmitting members is brought into contact with the boundary surface of said optical waveguide to stop emitting of the light propagating in said optical waveguide from said second end surface to direct light outside via the boundary surface, another function being that said at least one flexible light transmitting member is brought into a non-contact condition with respect to the boundary surface of said optical waveguide to emit the light propagating in said optical waveguide, and

wherein said light emitting from said second end surface of said optical waveguide to outside is used for image exposure.

5. (original): The exposure head according to claim 4, wherein said light source emits the light diffusing in an arrangement direction of said plurality of flexible light transmitting members, and each of said plurality of flexible light transmitting members is disposed so as to have a predetermined distance from the first end surface of the light incidence side of the optical waveguide with respect to the traveling direction of the light.

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6. (original): The exposure head according to claim 4, wherein said light emitted from said light source is directly entered to the first end surface on the light incidence side of said optical waveguide.

7. (original): The exposure head according to claim 4, further comprising:
a lens disposed between a light emission portion of said light source and the first end surface on the light incidence side of said optical waveguide.

8. (original): The exposure head according to claim 4, further comprising:
an imaging optical system focusing the light emitted from the optical waveguide at a predetermined position.

9. (original): An image recording apparatus, comprising:
an exposure head; and
a scanning device for relatively moving a photosensitive material and said exposure head, said exposure head having:
an optical modulator which includes:
an optical waveguide for receiving light entered from a first end surface thereof and for emitting the light from a second end surface opposing to the first end surface;

a plurality of flexible light transmitting members, disposed so as to face with a boundary surface of said optical waveguide and has a gap between the flexible members and the boundary surface of the optical waveguide, said plurality of flexible light transmitting members being arranged in a direction orthogonal to a traveling direction of the light in the optical waveguide;
and

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a modulation device for bringing said plurality of flexible light transmitting members into contact with the boundary surface of the optical waveguide, said modulation device being set in correspondence with each of said plurality of flexible light transmitting members; and

a light source allowing the light to enter into the first end surface on a light incidence side of the optical waveguide.

Claims 10-18. (canceled).

19. (currently amended): The ~~modulator~~ exposure head of claim 4, wherein the boundary surface of the optical waveguide is on a surface different from the first end surface and the second end surface.

20. (canceled).

21. (currently amended): An exposure head, comprising:

an optical modulator which includes:

an optical waveguide for receiving light entered from a first end surface thereof and for emitting the light from a second end surface opposing to the first end surface;

a plurality of light adjustment members, disposed to face at least one of: a boundary surface of the optical waveguide and the second end surface of the optical waveguide, wherein the boundary surface is disposed on a face of the optical waveguide other than the first and second end surfaces; and

a driving device to change a configuration of the light adjustment ~~member~~ members to modulate light propagated by the waveguide,

wherein said driving device switches functions of said optical waveguide in relation to at least one of the plurality of light adjustment members, one function being that the at least one

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light adjusting member is brought into contact with the boundary surface of said optical waveguide to stop emitting of the light propagating in said optical waveguide from said second end surface to direct light outside via the boundary surface, another function being that said light adjusting member is brought into a non-contact condition with the boundary surface of said optical waveguide to emit the light propagating in said optical waveguide, and
wherein said light emitting from said second end surface of said optical waveguide to outside is used for image exposure.

22. (previously presented): An image recording apparatus, comprising:
an exposure head; and
a scanning device for relatively moving a photosensitive material and said exposure head, said exposure head having:
an optical modulator which includes:
an optical waveguide for receiving light entered from a first end surface thereof and for emitting the light from a second end surface opposing to the first end surface;
a plurality of light adjustment members, disposed to face at least one of: a boundary surface of the optical waveguide the second end surface of the optical waveguide, wherein the boundary surface is disposed on a face of the optical waveguide other than the first and second end surfaces; and
a driving device to change a configuration of the light adjustment member to modulate light propagated by the waveguide.

23. (canceled).

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24. (currently amended): The ~~optical modulator~~ exposure head of claim 23~~19~~,
~~comprising a~~ wherein each of said plurality of the flexible light transmitting members, ~~each light~~
~~transmitting member having~~ has an edge aligned with the second end surface of the waveguide.

25. (previously presented): The image recording apparatus according to claim 9,
wherein said modulation device switches functions of said optical waveguide in relation to at
least one of the plurality of flexible light transmitting members, one function being that said at
least one flexible light transmitting member is brought into contact with the boundary surface of
said optical waveguide to stop emitting of the light propagating in said optical waveguide from
said second end surface to direct light outside via the boundary surface, another function being
that said flexible light transmitting member is brought into a non-contact condition with the
boundary surface of said optical waveguide to emit the light propagating in said optical
waveguide.

Claims 26-28. (canceled).

29. (currently amended): An exposure head, comprising:

an optical modulator which includes:

an optical waveguide for receiving light entered from a first end surface thereof and for
emitting the light from a second end surface opposing to the first end surface;

a plurality of flexible light transmitting members, disposed so as to face with a boundary
surface of said optical waveguide and has a gap between the flexible members and the boundary
surface of the optical waveguide, said plurality of flexible light transmitting members being
arranged in a direction orthogonal to a traveling direction of the light in the optical waveguide;
and

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a modulation device for bringing said plurality of flexible light transmitting members into contact with the boundary surface of the optical waveguide, said modulation device being set in correspondence with each of said plurality of flexible light transmitting members; and

a light source allowing the light to enter into the first end surface on a light incidence side of the optical waveguide, and

a light receiving structure disposed adjacent to the second end surface to use the light emitted from the second end surface of the waveguide, and

wherein said light emitting from said second end surface of said optical waveguide to outside is used for image exposure.

30. (previously presented): The exposure head of claim 29, wherein the modulation device controls the plurality of flexible light transmitting members independently of each other.